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NEWS 7 DEC 21 IPC search and display fields enhanced in CA/CAPLUS with the  
IPC reform  
NEWS 8 DEC 23 New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/  
USPAT2  
NEWS 9 JAN 13 IPC 8 searching in IFIPAT, IFIUDb, and IFICDB  
NEWS 10 JAN 13 New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to  
INPADOC  
NEWS 11 JAN 17 Pre-1988 INPI data added to MARPAT  
NEWS 12 JAN 17 IPC 8 in the WPI family of databases including WPIFV  
NEWS 13 JAN 30 Saved answer limit increased

NEWS EXPRESS JANUARY 03 CURRENT VERSION FOR WINDOWS IS V8.01,  
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.  
V8.0 USERS CAN OBTAIN THE UPGRADE TO V8.01 AT  
<http://download.cas.org/express/v8.0-Discover/>

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FILE 'HOME' ENTERED AT 10:58:06 ON 30 JAN 2006

=> file medline  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

FILE 'MEDLINE' ENTERED AT 10:58:16 ON 30 JAN 2006

FILE LAST UPDATED: 28 JAN 2006 (20060128/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 will soon be available. For details on the 2005 reload, enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)  
[http://www.nlm.nih.gov/pubs/techbull/nd05/nd05\\_med\\_data\\_changes.html](http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html)  
[http://www.nlm.nih.gov/pubs/techbull/nd05/nd05\\_2006\\_MeSH.html](http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html)

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate

```
=> s carbonyl (w) reductase
    16072 CARBONYL
    1195 CARBONYLS
    16823 CARBONYL
        (CARBONYL OR CARBONYLS)
    57646 REDUCTASE
    12262 REDUCTASES
    60900 REDUCTASE
        (REDUCTASE OR REDUCTASES)
L1      501 CARBONYL (W) REDUCTASE
```

```
=> s n-benzyl-pyrrolidinol
    798333 N
    11903 BENZYL
    1 BENZYLS
    11903 BENZYL
        (BENZYL OR BENZYLS)
    16 PYRROLIDINOL
    8 PYRROLIDINOLS
    23 PYRROLIDINOL
        (PYRROLIDINOL OR PYRROLIDINOLS)
L2      0 N-BENZYL-PYRROLIDINOL
        (N(W) BENZYL (W) PYRROLIDINOL)
```

=> file .mymstn	SINCE FILE	TOTAL
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	1.56	1.77

FILE 'MEDLINE' ENTERED AT 11:00:51 ON 30 JAN 2006

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=> s carbonyl (w) reductase  
L3 2231 CARBONYL (W) REDUCTASE

=> s n-benzyl-pyrrolidinol  
L4 0 N-BENZYL-PYRROLIDINOL

=> s n-benzyl-3-pyrrolidinol  
L5 20 N-BENZYL-3-PYRROLIDINOL

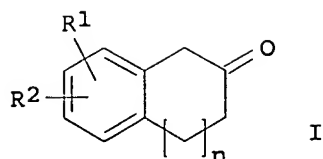
=> s n-benzyl-3-pyrrolidinone  
L6 12 N-BENZYL-3-PYRROLIDINONE

=> s l5 and l6 and l3  
L7 1 L5 AND L6 AND L3

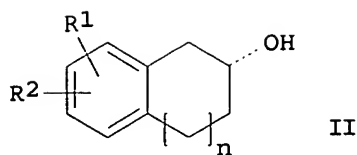
=> d ibib abs l7 1

L7 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:270104 CAPLUS  
DOCUMENT NUMBER: 140:299427  
TITLE: Novel carbonyl reductase from  
Devosia riboflavina, gene, and use for synthesis of  
optically active alcohols  
INVENTOR(S): Kizaki, Noriyuki; Nishiyama, Tozo; Yasohara, Yoshihiko  
PATENT ASSIGNEE(S): Kaneka Corporation, Japan  
SOURCE: PCT Int. Appl., 48 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

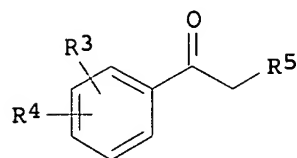
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004027055	A1	20040401	WO 2003-JP11957	20030919
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1553170	A1	20050713	EP 2003-797682	20030919
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
PRIORITY APPLN. INFO.:			JP 2002-272976	A 20020919
			WO 2003-JP11957	W 20030919
OTHER SOURCE(S):	MARPAT 140:299427			
GI				



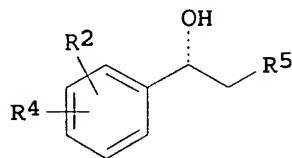
I



II



III



IV

AB A novel enzyme capable of catalyzing stereoselective reduction of N-benzyl-3-pyrrolidinone to produce (S)-N-benzyl-3-pyrrolidinol, encoding gene, recombinant expression, and use in synthesis of optically active alcs. from carbonyl compds., are disclosed. Stereoselective reduction of 2-tetralone derivative (I; R1, R2 = H, OH, alkoxy; n = 1, 2) to form 2-tetralol derivative (II; R1, R2, n = same as I), and reduction of 1-phenylethanone derivative [III; R3, R4 = H, halogen, alkoxy, nitro; R5 = H, halogen, OH, (substituted)alkyl] to form 1-phenylethanol derivative (IV; R3, R4, R5 = same as III) is claimed. Purification of N-benzyl-3-pyrrolidinone reductase (RDR) and cloning of its gene from *Devosia riboflavina* strain IF013584, characterization of enzyme activity, and recombinant expression in *E. coli* for the synthesis of (S)-N-benzyl-3-pyrrolidinol, are described. Optically pure (S)-N-benzyl-3-pyrrolidinol (>99%ee) was obtained in *E. coli* expressing RDR and *Bacillus megaterium* glucose dehydrogenase. The enzyme have the following physicochem. properties: (1) function: asym. reducing N-benzyl-3-pyrrolidinone by using NADH or NADPH as a coenzyme to form (S)-N-benzyl-3-pyrrolidinol; (2) optimum functional pH: 5.5 to 6.0; (3) optimum functional temperature: 50° to 55°; (4) mol. weight: about 55,000 in gel filtration anal., or about 28,000 in SDS-PAGE. Synthesis of (R)-7-methoxy-2-tetralol from 7-methoxy-2-tetralone, of (R)-3-methoxy-6,7,8,9-tetrahydro-5H-benzocycloheptan-6-ol from 3-methoxy-6,7,8,9-tetrahydro-5H-benzocycloheptan-6-on, of (S)-2-chloro-1-(4'-fluorophenyl) ethanol from 2-chloro-1-(4'-fluorophenyl) ethanone, and of (S)-2-chloro-1-(3'-chlorophenyl) ethanol from 2-chloro-1-(3'-chlorophenyl) ethanone (all >99%ee), were shown in *E. coli* expressing RDR and *Bacillus megaterium*-derived glucose dehydrogenase.

REFERENCE COUNT:

8

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